



# Spy Pond Edge Protection and Erosion Control Project

Town of Arlington, MA

Public Meeting #3

01 December 2016



# Agenda – Spy Pond

- Introductions (Conservation Commission)
- Project Location and Goals
- Existing Shoreline Conditions
- Preferred Concepts
- Next Steps
- Questions and Comments

# Project Location



# Project Goals

1. Preserve, stabilize & strengthen the pond's banks
2. Control bank erosion
3. Protect & enhance wildlife habitat
4. Control access to prevent unauthorized paths
5. Broaden & strengthen constituency groups
6. Increase quality & opportunity for water use
7. Promote stormwater infiltration along the shoreline
8. Implement environmental education

# Site Activities

## Activities

- Ball Playing
- Jogging & Walking
- Kayaking & Canoeing
- Fishing
- Picnicking & Gathering
- Children's Play
- Crew Team



# Shoreline Categorization

## STABLE

- Vegetated
- Uncompacted soils
- Controlled runoff
- Shallower slopes
- Controlled human use
- Hard or soft edge

VS.

## UNSTABLE

- Loss of stabilizing vegetation
- Compacted soils
- Uncontrolled runoff
- Steep slopes
- Uncontrolled human use

## Three Categories:

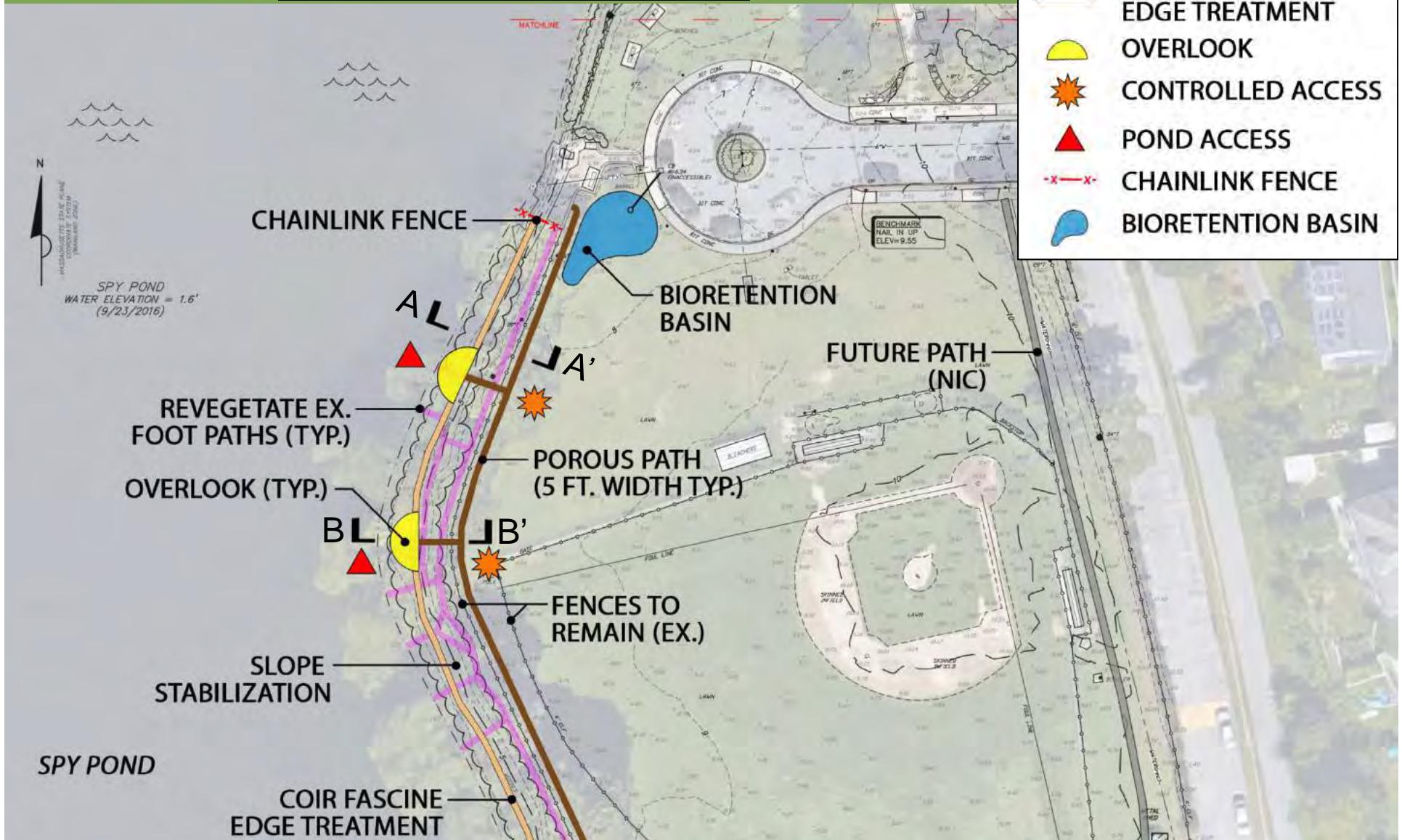
- Unstable
- Marginally Stable
- Stable

# Scannell Field



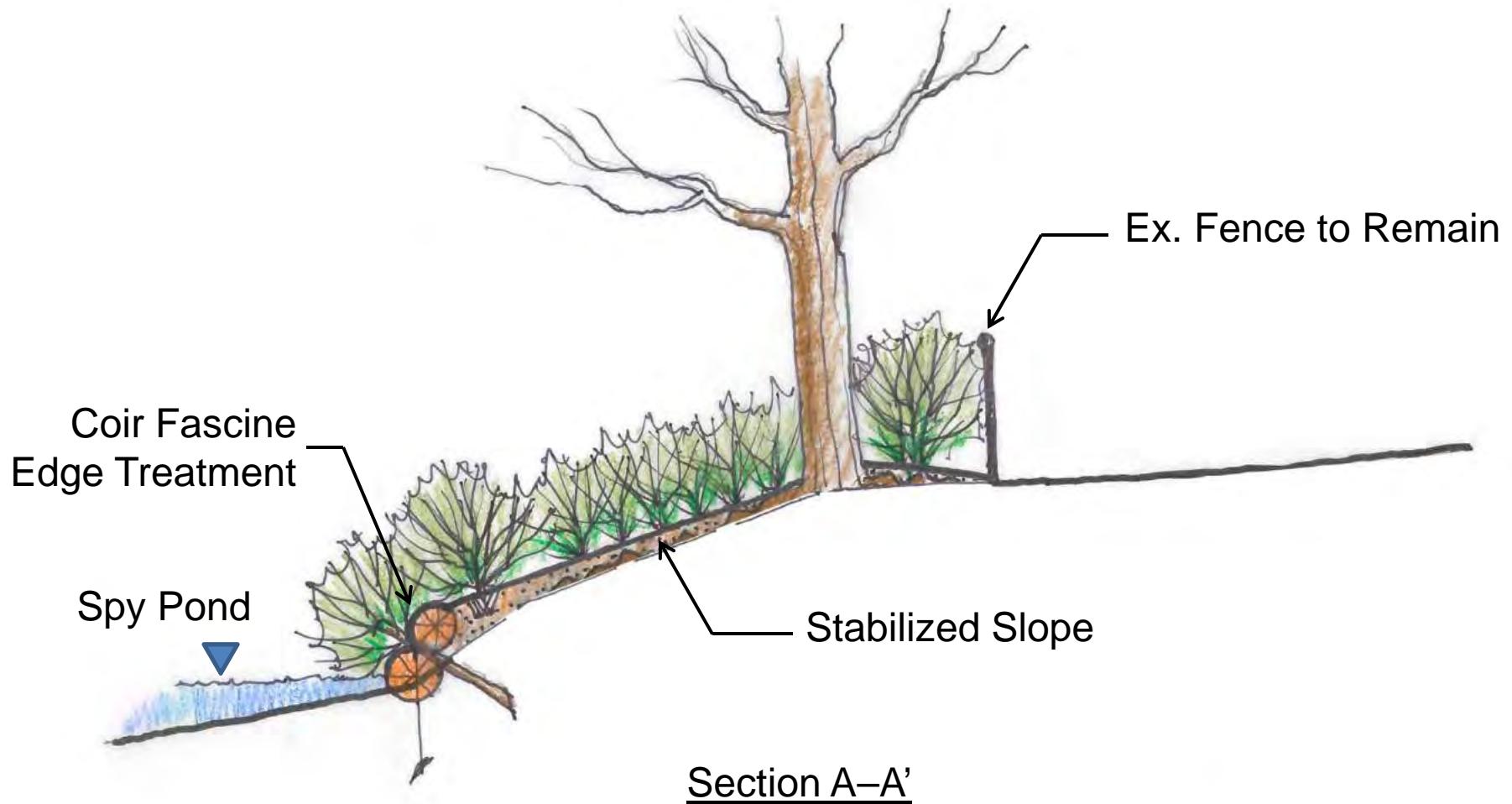
# Preferred Concept

## Scannell Field



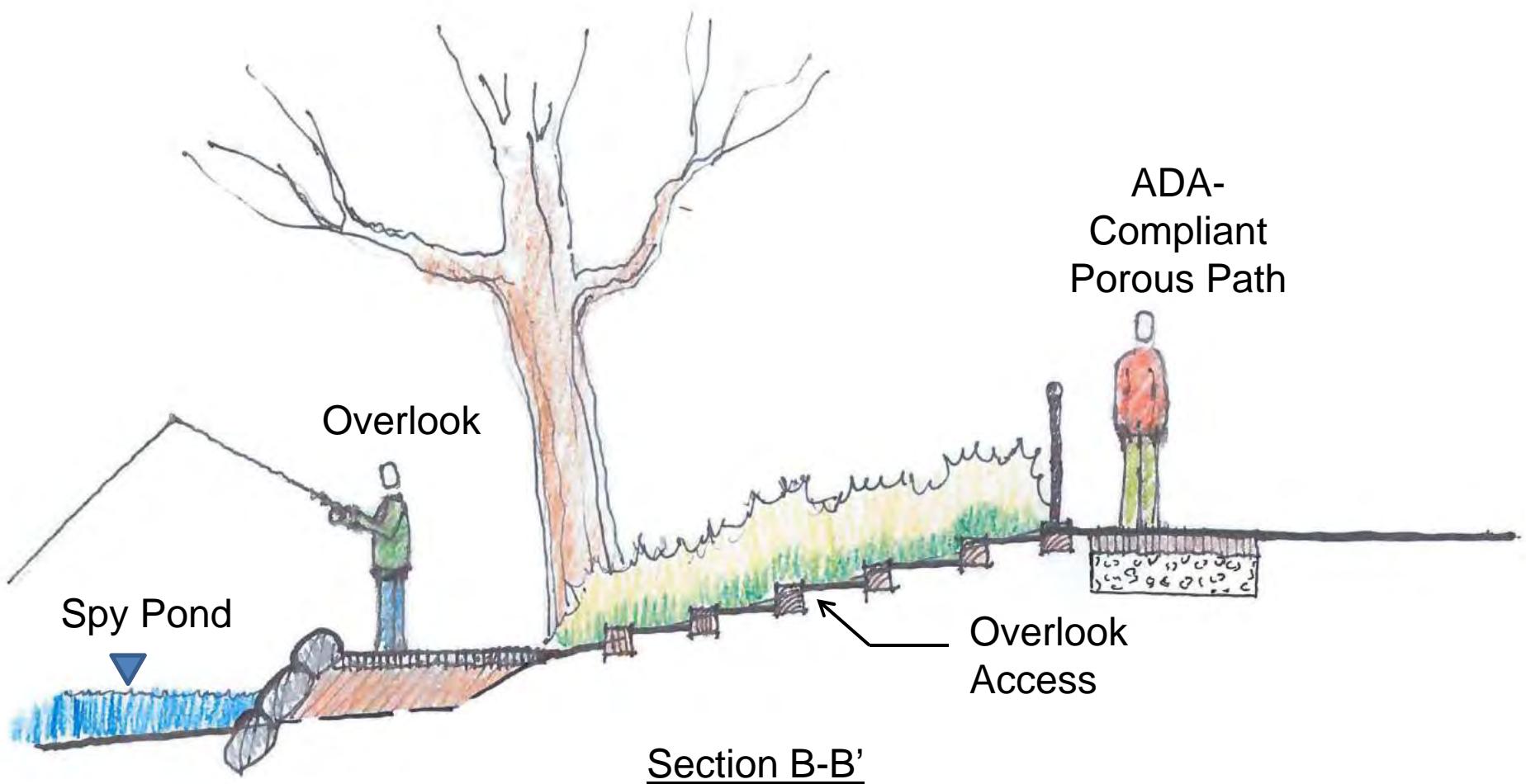
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## Scannell Field



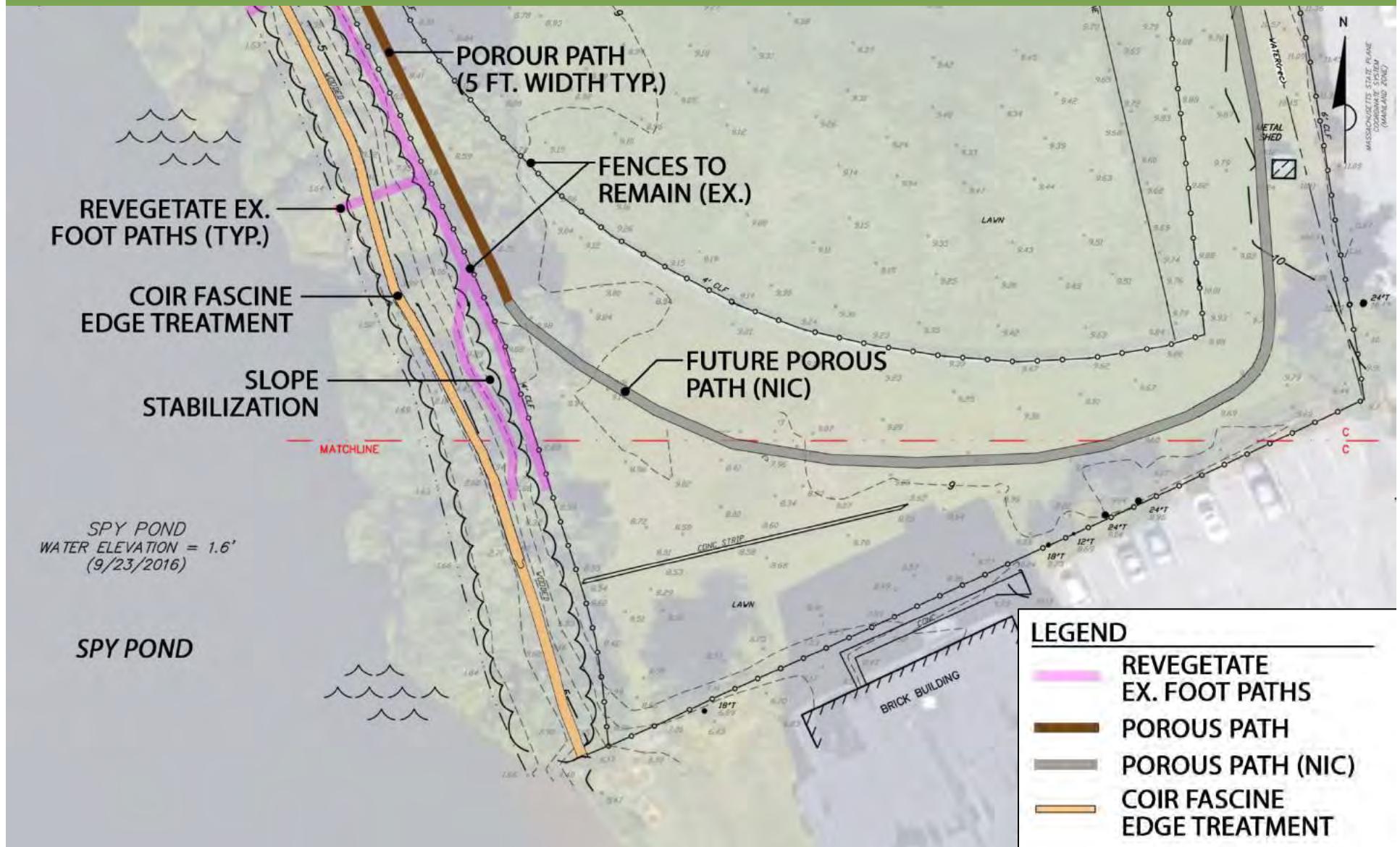
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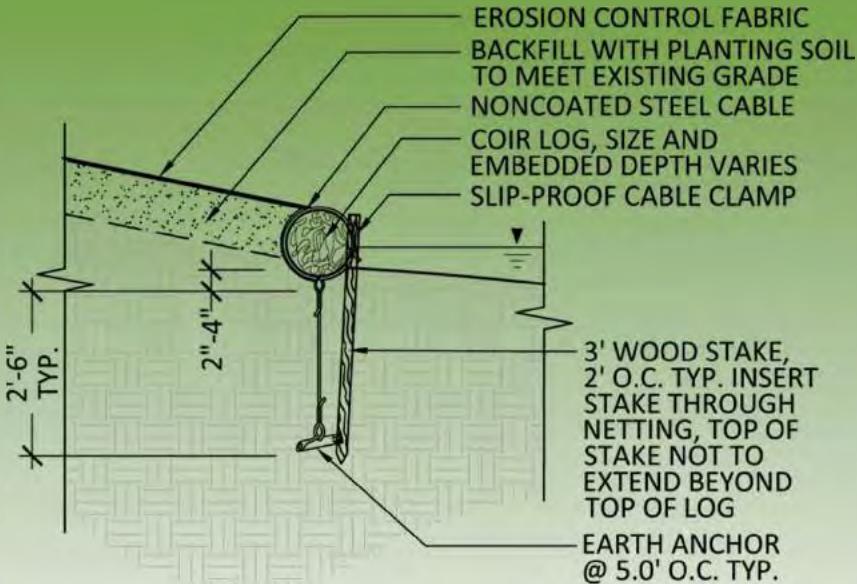


# Preferred Concept

## Scannell Field



# Coir Fascines



# Stormwater Management

## Porous Pavement



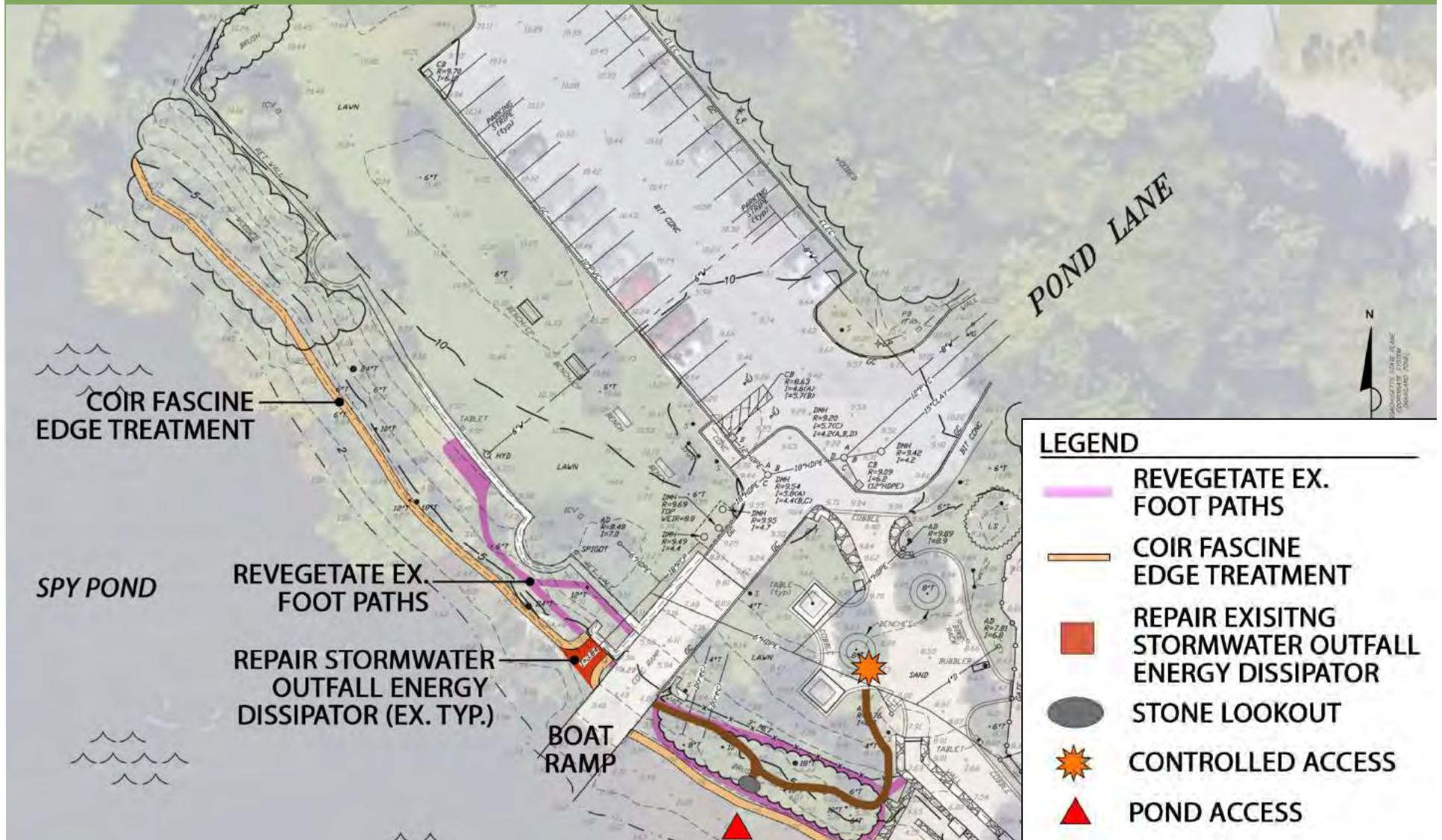
## Bioretention Basin



# Spy Pond Park

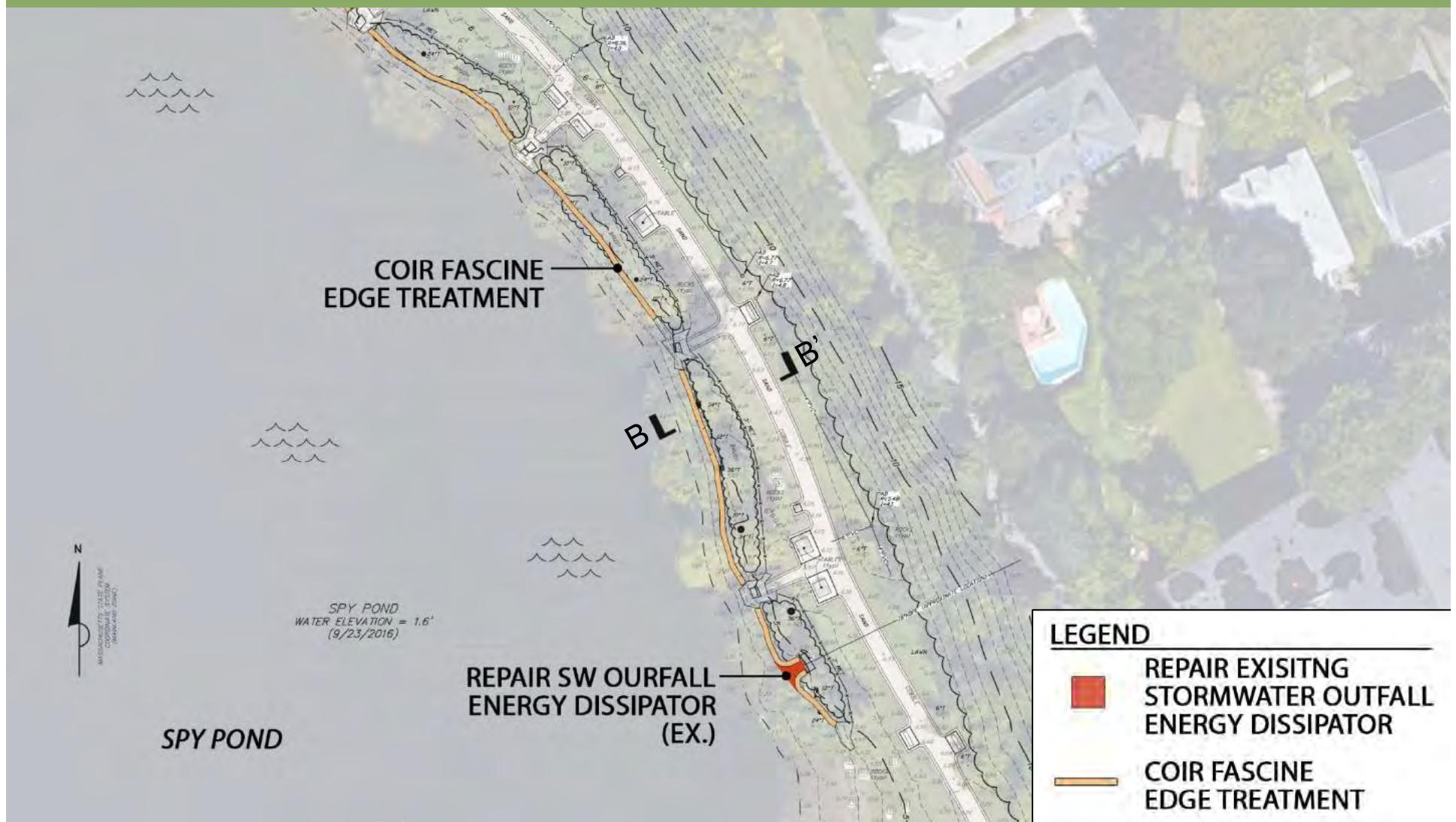


# Preferred Concept Spy Pond Park (No Access Treatment)



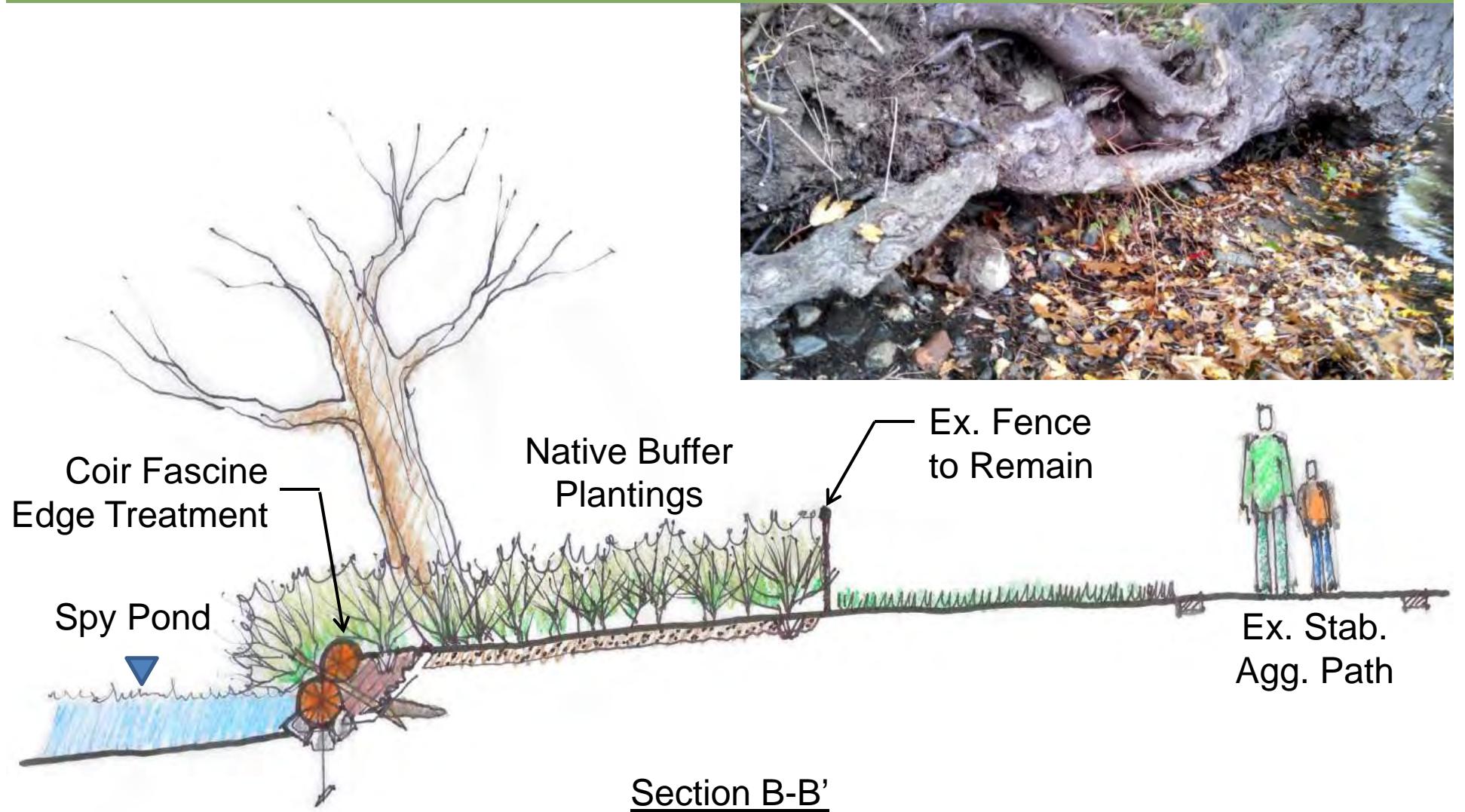
# Preferred Concept

## Spy Pond Park (No Access Treatment)

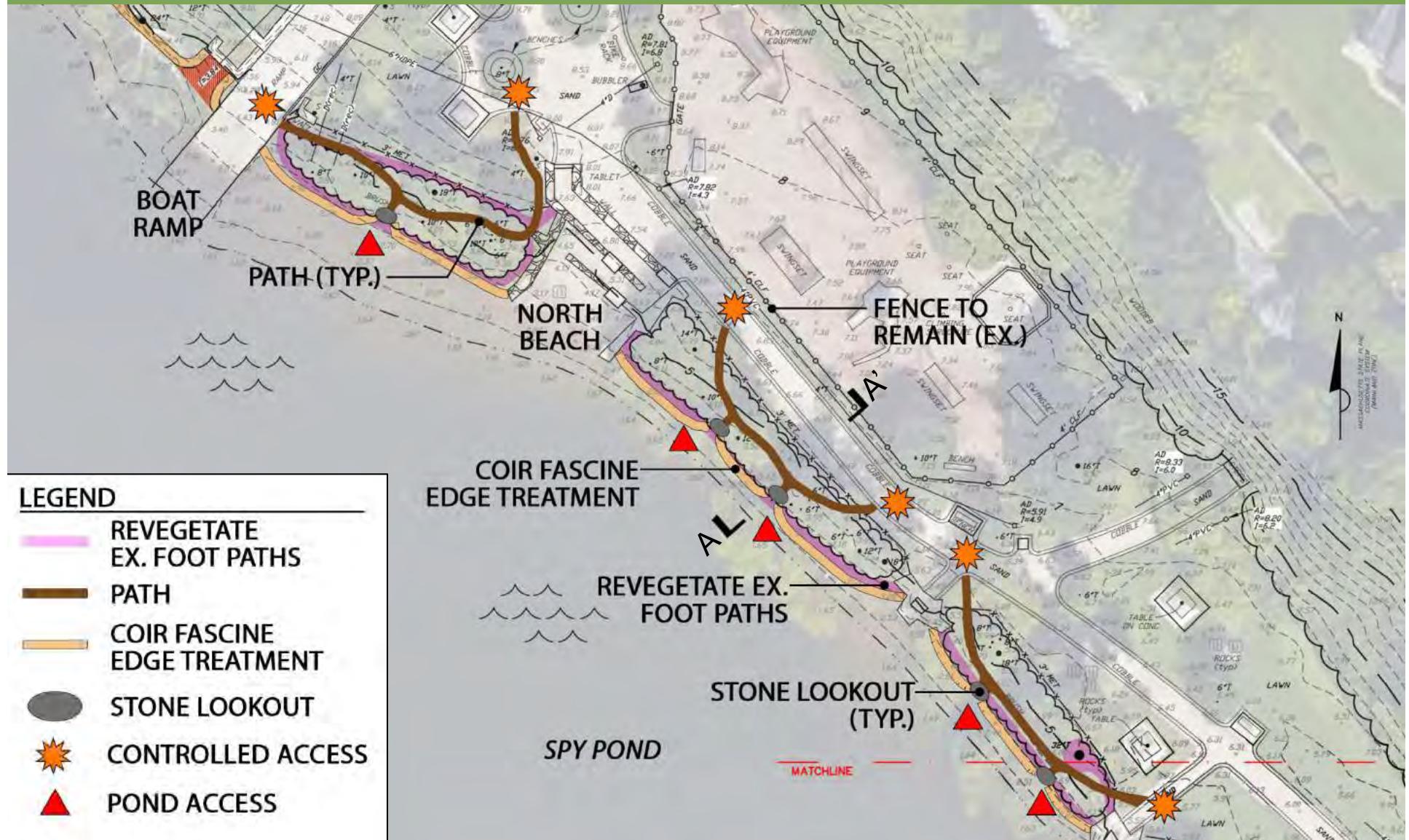


# Preferred Concept

## Spy Pond Park (No Access Treatment)

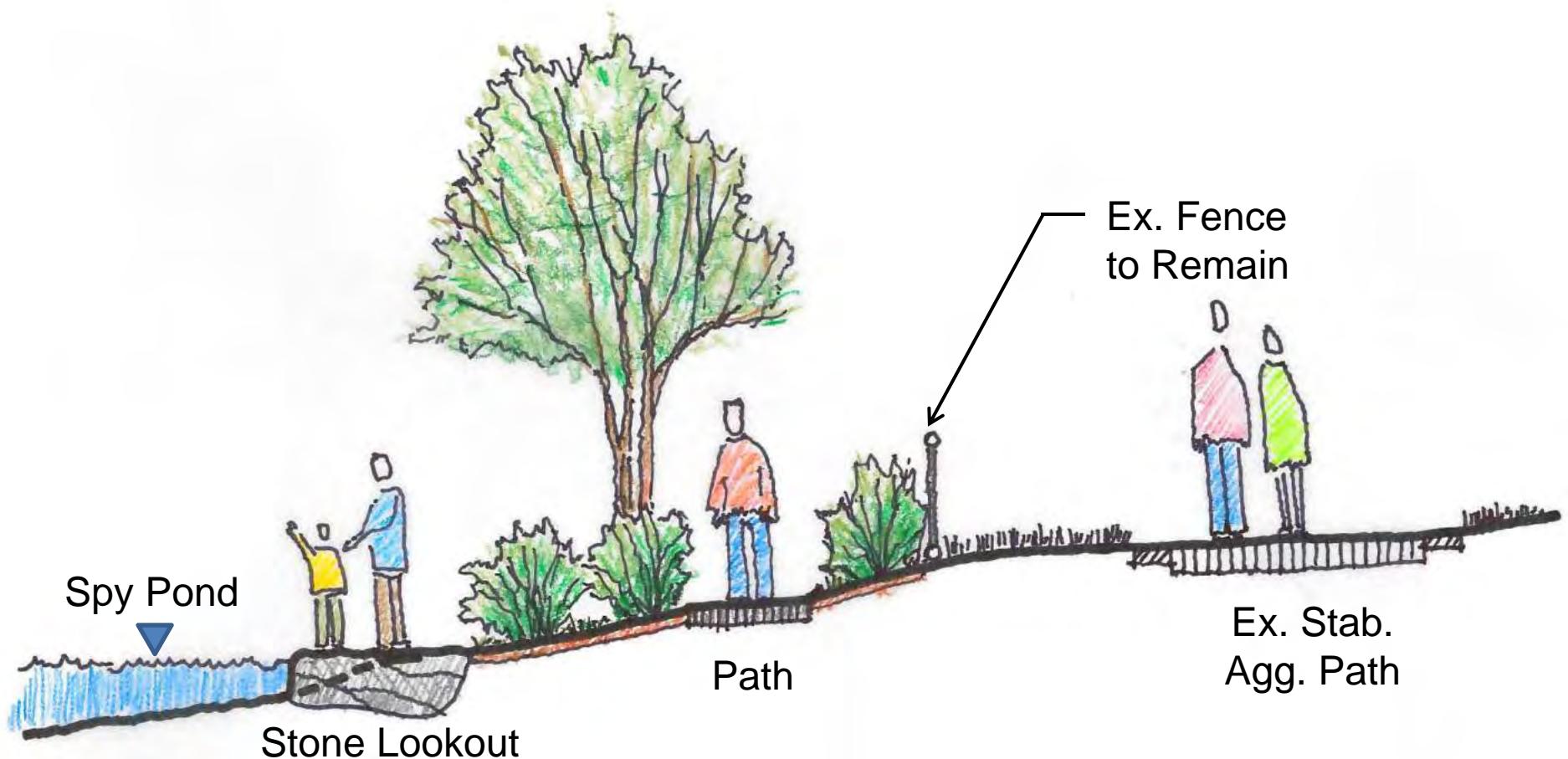


# Preferred Concept Spy Pond Park (Limited Access Treatment)



# Preferred Concept

## Spy Pond Park (Limited Access Treatment)



Section A-A'

# Educational Signage - Examples

 Fresh Pond Reservation  
Protecting the Cambridge Water Supply since 1889

## Stream C Woodland Restoration

### Area Features

- Native woodland wildlife habitat
- Wildlife nesting area
- Vegetated buffer

To protect this habitat for *all* to enjoy

- Stay on roadway
- Keep dogs out

*Thank you for helping us protect the ecological functions of these water supply lands and their natural beauty*

Cambridge Water Board  
City of Cambridge Water Department  
250 Fresh Pond Parkway  
[www.cambridgema.gov/water](http://www.cambridgema.gov/water)

David Kaplan, Watershed Manager  
617.348.4900  
[dkaplan@cambridgema.org](mailto:dkaplan@cambridgema.org)

## Permanent



## Temporary

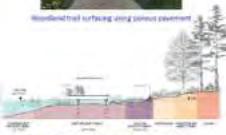


## Black's Nook Site Improvements

The Fresh Pond Reservation Master Plan identifies reconstruction and stabilization of the degraded shoreline of Black's Nook as a very high priority. In response, this restoration project aims to increase wildlife habitat value and water quality by fostering native wetland and woodland plant communities and stabilizing the shoreline with native vegetation, tree logs, and erosion control matting. In order to enhance the use of the pond as a natural resource, the project will include a new entrance to the pond, a new woodland trail using porous pavement, observation platforms, and an elevated wooden path. A created vernal pool will also provide important breeding habitat for amphibians and invertebrates. By widening paths and improving the Concord Avenue entrance, this project will allow for universal accessibility while also preserving the sense of wildness that makes Black's Nook unique.

A shorter trail, an elevated wooden platform, and observation platforms improve access to the pond and protect environmentally sensitive resource areas.

Construction Schedule: Site improvements begin in the Fall 2010 and will be completed by Summer 2011.

To receive updates on current project work, email us at [fpr@cambridgema.gov](mailto:fpr@cambridgema.gov)



# Plant Establishment



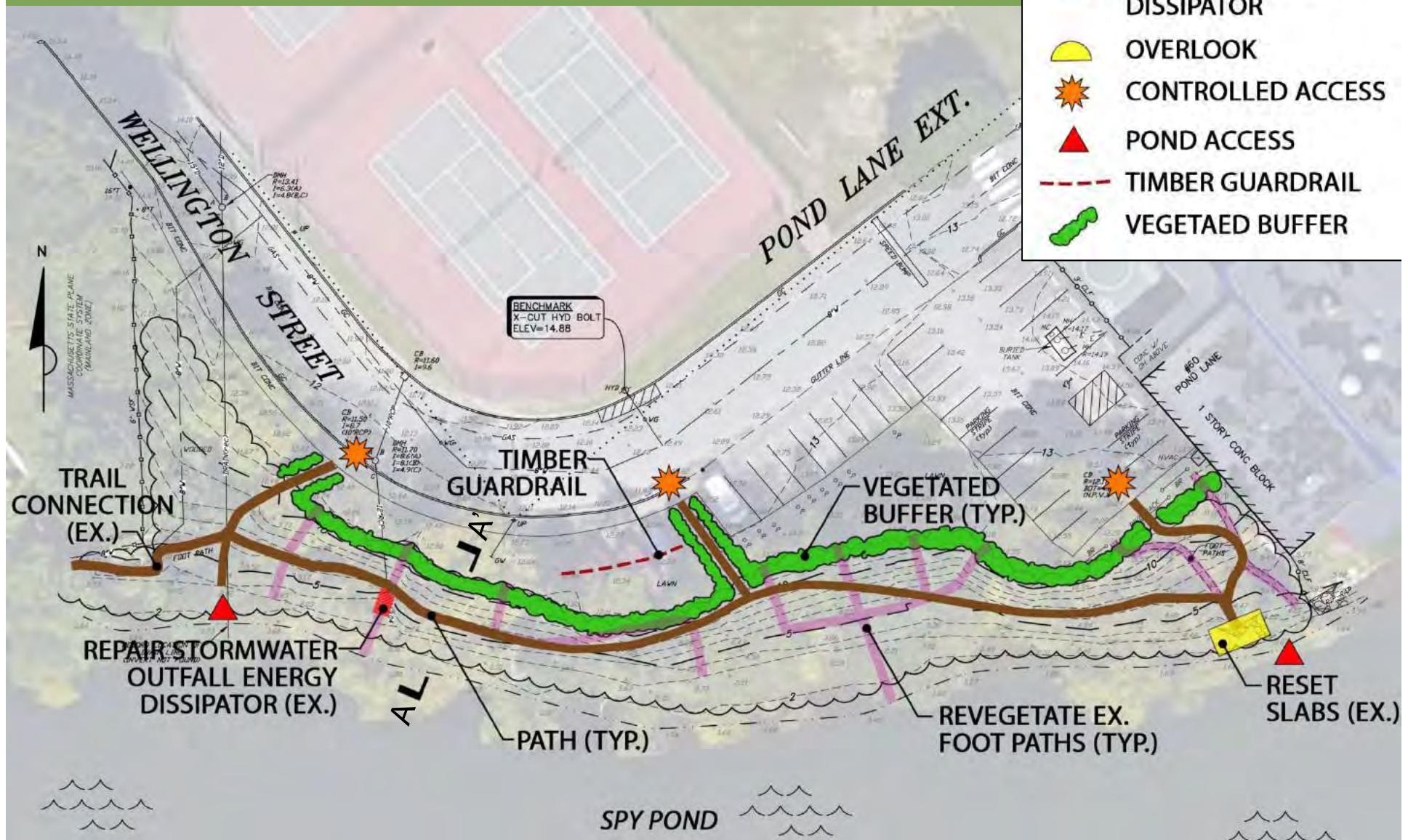
# Boys & Girls Club



# Preferred Concept Boys & Girls Club

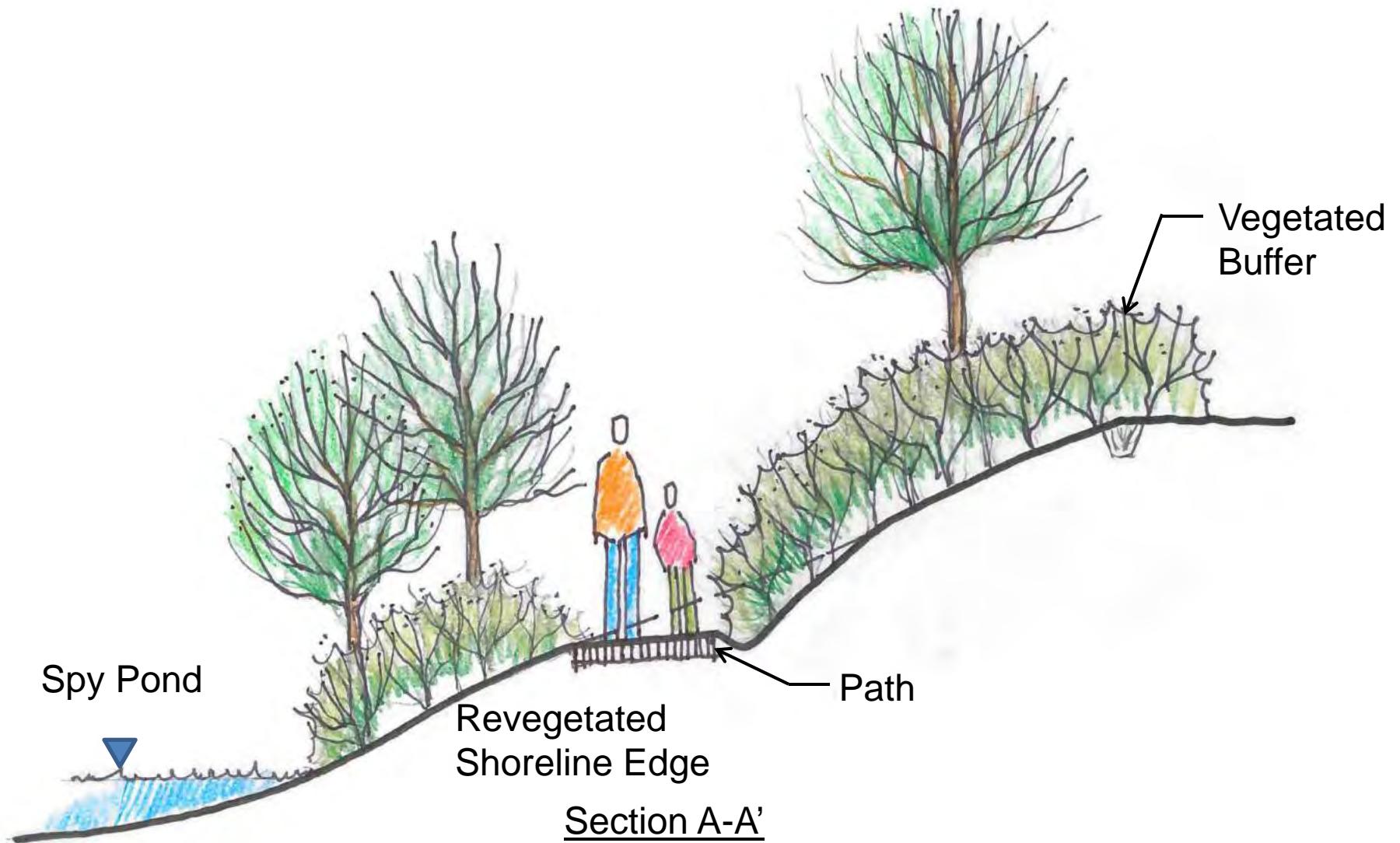
## LEGEND

- REVEGETATE EX. FOOT PATHS
- PATH
- REPAIR STORMWATER OUTFALL ENERGY DISSIPATOR
- ▲ OVERLOOK
- ★ CONTROLLED ACCESS
- ▲ POND ACCESS
- - - TIMBER GUARDRAIL
- VEGETATED BUFFER

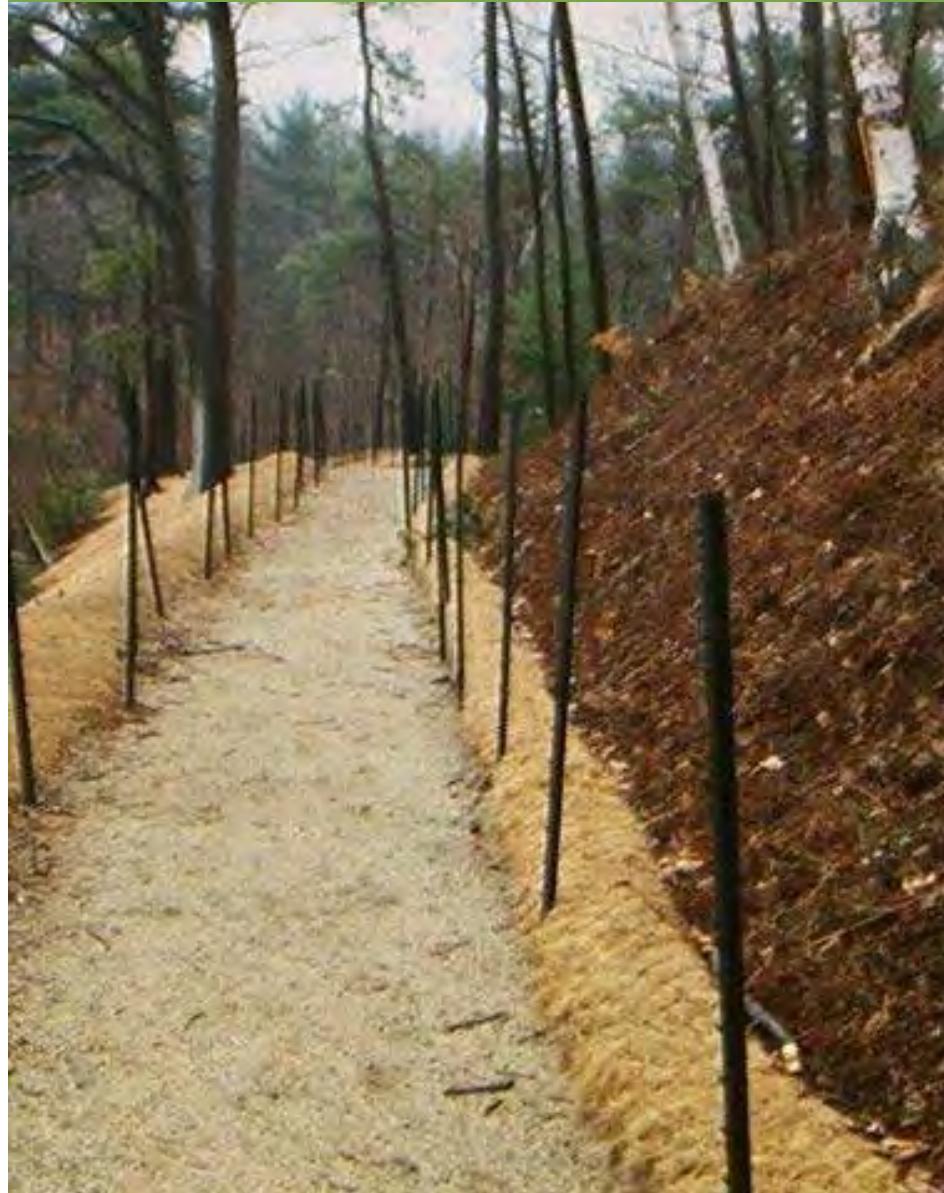


# Preferred Concept

## Boys & Girls Club



Shoreline path during construction (1996)



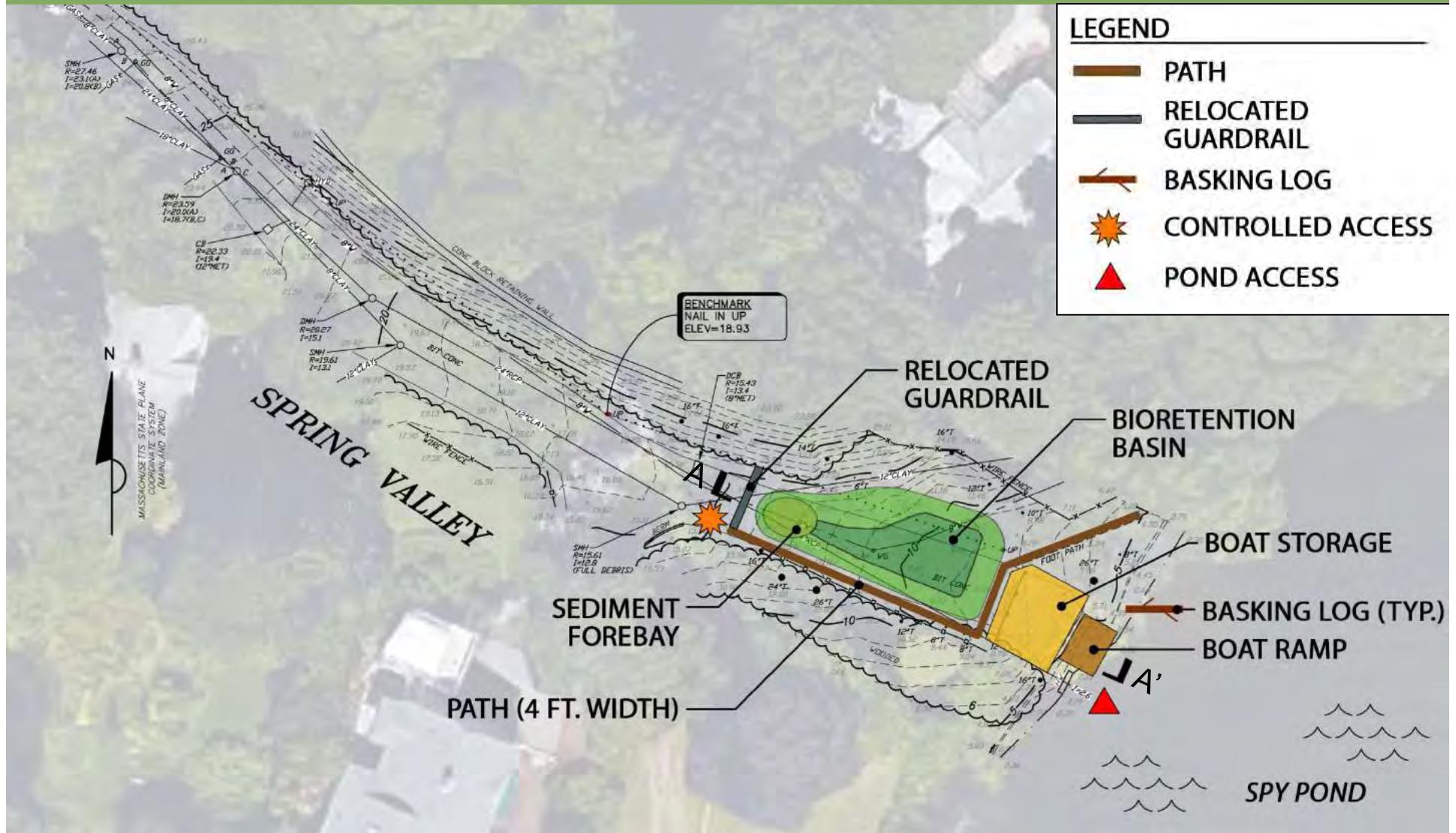
Three years later



# Spring Valley Street

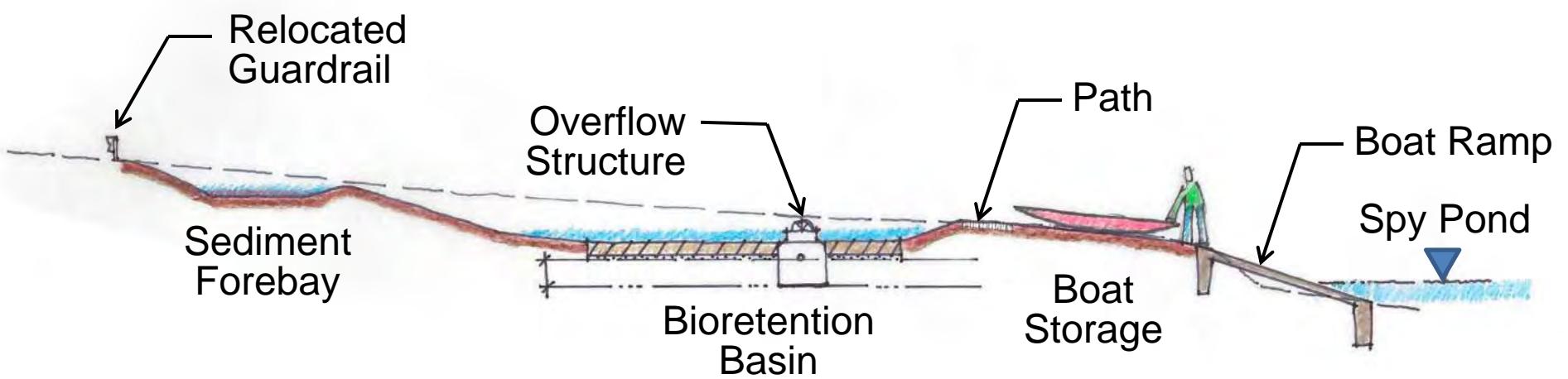


# Preferred Concept Spring Valley Street



# Preferred Concept

## Spring Valley Street



Section A-A'

# Shoreline Planting

## High Marsh Herbaceous Plants



Left to Right: *Eupatorium maculatum*, *Eupatorium perfoliatum*, *Juncus canadensis*, *Juncus effusus*



Left to Right: *Carex stipata*, *Carex vulpinodea*, *Caltha palustris*



Left to Right: *Hibiscus moscheutos*, *Scirpus cyperinus*, *Leersia oryzoides*

# Shoreline Planting

## Native Shrubs (Low to Medium)



Left to Right: *Spiraea tomentosa*, *Cornus sericea*, *Rosa palustris*



Left to Right: *Rhus aromatica*, *Clethra alnifolia*, *Photinia pyrifolia*

# Shoreline Planting

## Native Shrubs (Tall)



Left to Right: *Cornus amomum*, *Ilex verticillata*, *Cephalanthus occidentalis*



Left to Right: *Alnus rugosa*, *Vaccinium corymbosum*, *Salix discolor*

# Next Steps

## Final Concept Plan

- Permitting Schedule
- Maintenance Schedule
- Preliminary Estimate of Construction Costs
- CPA Funding Application for Phase 2

# Project Schedule

- July - December 2016 - Phase 1:  
Existing Site Analysis & Concept Plan
- December 2016: CPA Funding  
Application for Phase 2
- July 2017 - Phase 2: Construction  
Documents
- November 2017: Permit Applications
- February 2018: Project out to Bid
- April - August 2018: Construction

# Questions or Comments?

Chester Engineers

Hilary Holmes, Project Manager

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[hholmes@chesterengineers.com](mailto:hholmes@chesterengineers.com)

Presentation will be posted on the  
Conservation Commission website